

CLAIMS

1. A positioning system comprising a fixed base unit, at least one mobile unit and a data recorder, wherein the base unit and the or each mobile unit include a GPS receiver and wherein the or each mobile unit is arranged to record its position indicated by its GPS receiver and the data recorder is arranged to compare the recorded position of the mobile unit with the position recorded simultaneously by the fixed base unit from its GPS receiver to establish the position of the mobile unit relative to the base unit.
2. A system as claimed in claim 1 comprising a vehicle position identifying system wherein the mobile unit is provided in a vehicle and is arranged to transmit its instantaneous GPS identified position to the data recorder together with identification information identifying the vehicle or mobile unit.
3. A system as claimed in claim 2 wherein the mobile unit includes a processor connectable to a GPS receiver and a vehicle transmitter.
4. A vehicle as claimed in claim 3 in which the processor is further connectable to one or more of a computer terminal, a keyboard, a remote display, a CRT, a magnetic stripe reader, a vehicle monitoring system, a printer, a finger print imager, a radio frequency identification tag, a radio frequency wide area network, a satellite network, a collision avoidance system, a automatic weighing system or a remote memory store.
5. A system as claimed in claim 3 further comprising a

portable terminal, the portable terminal being connectable to the processor and including a bar code reader for inputting identification information to the processor.

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6. A system as claimed in claim 3 wherein the processor is connectable to one or more information input or output devices all of which are serial connected and arranged to receive power from the vehicle.

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7. A system as claimed in claim 1 comprising a stored item position identifying system wherein the or each mobile unit is arranged to record identification information for identifying an item simultaneously with its GPS identified position.

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8. A system as claimed in claim 7 in which the or each mobile unit comprises a bar code reader for reading a bar code symbol on an item to record identification information.

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9. A system as claimed in claim 7 in which the or each mobile unit communicates with a base station by radio communication.

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10. A system as claimed in claim 7 in which the mobile units and the base station comprise a local area network communicating by wireless communication.

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11. A system as claimed in claim 7 in which the or each mobile unit includes a data memory for storing a GPS identified position, item identification and time of reading information, and is arranged to download the information to the data recorder at a later stage.

12. A system as claimed in claim 1 further comprising a display unit for displaying the position of the or each mobile unit relative to the base unit.
- 5 13. A method of identifying the location of one or more mobile units relative to a fixed base unit wherein the or each mobile unit and the base unit are each equipped with a GPS receiver and wherein the mobile unit and base unit simultaneously record their GPS identified position and a data recorder records the position of the or each mobile unit relative to the base unit.
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- 15 14. A method as claimed in claim 13 in which the mobile unit transmits its GPS identified position information instantaneously.
- 20 15. A method as claimed in claim 13 in which the mobile unit stores its GPS position information together with the exact time at which the information is derived and subsequently downloads that data.
- 25 16. A method as claimed in claim 13 in which the or each mobile unit includes a bar code reader, and the mobile unit records its GPS identified position simultaneously with the reading of a bar code symbol on an item for identification of the position of the item relative to the base unit.
- 30 17. A vehicle position identifying system comprising a fixed base unit and at least one mobile unit mounted in a vehicle, the base unit and the mobile unit including GPS receivers and the system further comprising a data recorder wherein the data recorder is arranged to compare the simultaneous GPS identified positions of the mobile

unit and the base unit to determine the position of the mobile unit relative to the base unit.

18. An item position identification system comprising a
5 base unit and at least one mobile unit the base unit and
the mobile unit including GPS receivers, the mobile unit
including an input arrangement for inputting
identification information relating to an item and being
arranged to record its GPS identified position
10 simultaneously, the system further comprising a data
recorder arranged to compare the simultaneous GPS
identified positions of the mobile unit and the base unit
to establish the position of the mobile unit relative to
the base unit and further being arranged to associate the
15 identification information with the relative position.

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